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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,409	11/13/2003	Shlomo Assa	06155-082002	6830

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EXAMINER	
PHAM, HAI CHI	

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,409	ASSA ET AL.	
	Examiner	Art Unit	
	Hai C Pham	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/13/03, 12/08/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 5-7, 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellar (U.S. 4,636,043) in view of Norris et al. (U.S. 5,262,613).

Bellar discloses a laser beam marking system comprising a laser (16) configured to produce a printing beam (19) capable of printing a visible code (alphanumeric information) (col. 6, lines 50-52) on a product (21), a housing (73, Fig. 5) including a printing beam exit member (opening 130) (col. 10, lines 26-41) through which the printing beam exits the housing, and an optics assembly (lenses L1-L3) within the housing, the optics assembly being configured to focus the printing beam (via focusing lens L3) on the product when the product is adjacent to the housing.

However, Bellar fails to teach the laser being at most a 25 Watt laser, a 20 Watt laser, or a 15 Watt laser.

However, it is well known in the art of printing or engraving that the laser source is carefully selected for its output power based on the specific target product to be engraved, as evidenced by Norris et al., which teaches using a laser of low power such as a 20 Watt laser for engraving workpieces made of organic materials.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide a low powered laser source as taught by Norris et al. in the modified device of Bellar since it is known in the art that selective laser source has been used for each specific task. The motivation for doing so would have been to adjust the power of the laser to meet the requirement for laser marking of a particular target object without deteriorating the material.

Moreover, it would have been an obvious to one having ordinary skill in the art at the time the invention was made to provide a laser source of at most 15 Watt to fit a specific application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

On the other hand, with regard to claims 15-18, Bellar fails to teach the marking system having a certain limit in weight and volume. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to produce a compact printing system with a weight and volume that would fit to the application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regard to claims 5-7, 9-12, Bellar further teaches the optics assembly comprising a negative lens (L1) for expanding the printing beam, a positive lens (L3) for focusing the printing beam, and a collimating lens (L2) positioned between the negative lens and the positive lens (col. 3, lines 19-39, and col. 4, lines 25-63), electronics for

correcting the non-linearity of one or more lenses through which the printing beam passes (col. 2, lines 1-11), one or more mirrors (22, 30) for reflecting the printing beam in a desired direction, the mirror (30) being moved in the direction x by a stepping motor (28) operated under the control of a computerized control system, and the laser being an air cooled laser (col. 3, lines 61-68).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bellar in view of Norris et al., as applied to claim 1 above, and further in view of Krichever et al. (U.S. 5,367,152).

Bellar, as modified by Norris et al., discloses all the basic limitations of the claimed invention except for the printing beam exit member being movable.

However, Krichever et al. discloses a scanner having a laser source (32) enclosed in a housing (12), which has an exit port, and the laser emitting a laser beam exiting through a movable portion to change the position of the exit port.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Bellar, as modified by Norris et al., with the aforementioned teaching of Krichever et al. By doing so, it is possible to provide a flexible exit port on the laser housing to direct the outgoing laser beam toward a desired spot on the product.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellar et al. in view of Norris et al., as applied to claim 1 above, and further in view of Guillet (FR 2 271 683).

Bellar, as modified by Norris et al., discloses all the basic limitations of the claimed invention except for the bearing coupled to the printing exit member to the housing, the bearing having an axis of rotation.

However, Guillet discloses a laser machining device including a laser source (1), a housing (7) enclosing an optics assembly (lenses 4 and 5) at the printing beam exit end of the housing, and a bearing (rod bearing 14) coupled to the lens (4) at the exit end of the housing such that the lens is pivotal about the optical axis of the laser beam.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the bearing as taught by Guillet in the device of Bellar. The motivation for doing so would have been to minimize the vibration that would deflect the laser beam from its desired target as suggested by Guillet.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bellar in view of Norris et al., as applied to claim 1 above, and further in view of Xu (U.S. 6,121,574).

Bellar, in view of Norris et al., discloses all the basic limitations of the claimed invention except for the print zone light source for defining the print zone within which

the code is printed, and the print zone beam exiting the housing through the printing beam exit member.

However, Xu discloses a method and apparatus for marking two-dimensional bar code on the surface of a workpiece (W) using a laser source (22) along with a guide beam laser (24) to illuminate the sample at the printing area and to monitor the marking process, the laser beam L_M for marking and the guide beam L_G are combined to pass through the same exit member of the common housing (12).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate a guide laser source as taught by Xu in the modified device of Bellar. The motivation for doing so would have been to illuminate the sample at the printing area and to monitor the marking process.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai Pham

HAI PHAM
PRIMARY EXAMINER

May 1, 2004